

predetermined time from the input of the high voltage pulse signal in order to discriminate the first and second conditions based on the number of the pulse signals to be inputted during operation of the timer means.

10. The voltage regulator as in claim 9, wherein the pulse duration measuring means accumulates the duration of the high voltage pulse signal when the second condition is discriminated with the pulse counting means to determine the failure only when the accumulated duration exceeds a predetermined value.

11. The voltage regulator as in claim 7, wherein the discriminating means includes a storage means for storing the condition of the high voltage pulse as data and a reset signal generating means for resetting the data stored in the storage means after a predetermined time has passed.

12. A method for controlling power generation of an alternator for a vehicle comprising steps of:

detecting a high voltage pulse that is larger than a predetermined regulated voltage and exceeds a predetermined voltage smaller than a withstand voltage of a rectifier built in the alternator, when the pulse appears at an output terminal of the alternator;

discriminating a first condition where a single high voltage pulse is generated when an electric load connected to a power supply line is cut off and a second condition where the

high voltage pulse is frequently and repeatedly generated when a failure occurs in the power supply line; and

suppressing power generation of the alternator when the second condition is discriminated.